

A composite image of the solar system. At the top left, the Sun is shown as a bright, glowing sphere with rays. Below it, the gas giants Jupiter and Saturn are visible, with Saturn's rings clearly shown. To the right, Uranus and Neptune are depicted. In the foreground, the Earth and Moon are shown, along with several rocky planets and asteroids. A comet is also visible in the background.

Do Now

**Can you name the nine planets
in our Solar System? This
includes Earth...**





Mercury

Venus

Earth

Mars

Jupiter

Saturn

Uranus

Neptune



Do you know any ways to remember
all nine?

- My Very Excellent Mother Just
Sold Us Nine Pizzas

A detailed illustration of the Solar System. On the left, the Sun is depicted as a large, fiery orange sphere. To its right, the planets are shown in their respective orbits, represented by white lines. From left to right, the planets are: Mercury (a small grey sphere), Venus (a yellowish-brown sphere), Earth (a blue and white sphere), Mars (a reddish-brown sphere), Jupiter (a large orange and white striped sphere), Saturn (a yellow sphere with a prominent ring system), Uranus (a light blue sphere), and Neptune (a darker blue sphere). The background is a deep black space with some nebulae and distant stars visible.

Our Solar System

What is a Solar System?

- the collection of eight (or nine) planets and their moons in orbit around the sun, together with smaller bodies in the form of asteroids, meteoroids, and comets.



The Inner Planets



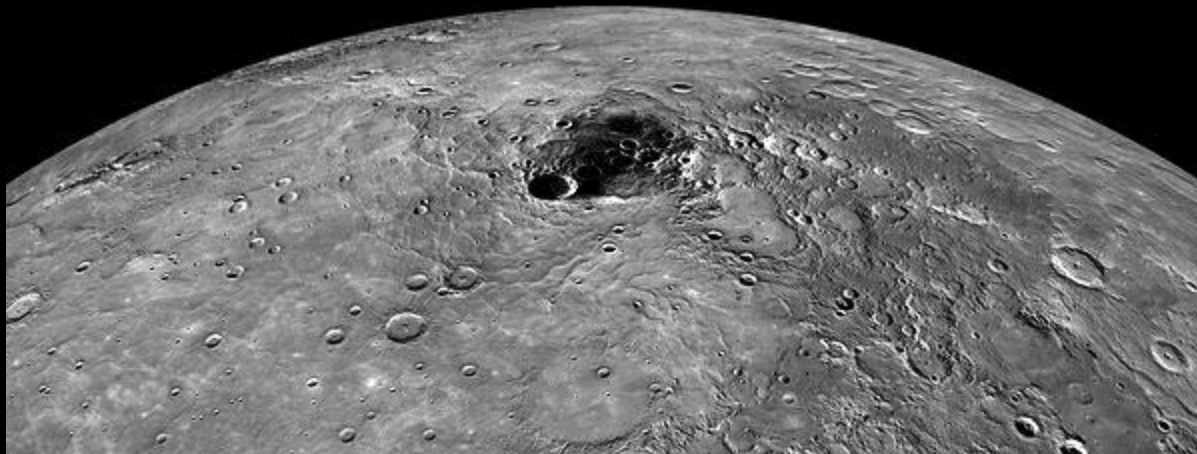


Mercury

- Fastest orbiting planet
- Orbit : the curved path of a celestial object or spacecraft around a star, planet, or moon.
- Planet nearest to the sun
 - One side of the planet can be 800 degrees Fahrenheit (hot enough to melt lead) when the other can be -280 degree Fahrenheit at the same time.

Mercury

- Approximately half the size of Earth
- Rocky surface covered by craters
- No water or air results in unchanged appearance



Mercury

- On Mercury you weigh only 38% of what you weigh on Earth.
 - So if you weigh 150lbs on Earth you will weigh 57 lbs on Mercury



Venus



- Second planet from the Sun
- Approximately the same size as the Earth
- Atmosphere consists of poisonous gases

Venus

- Venus has 90 times the pressure of Earth
- Venus has volcanoes like Earth
- Rotates in the opposite direction of Earth.
- At one time there were oceans but they have been boiled away



Venus



- On Venus you weigh only 91% of what you weigh on Earth.
 - If you weigh 150 lbs on Earth you will weigh 136.5 lbs on Venus

Earth



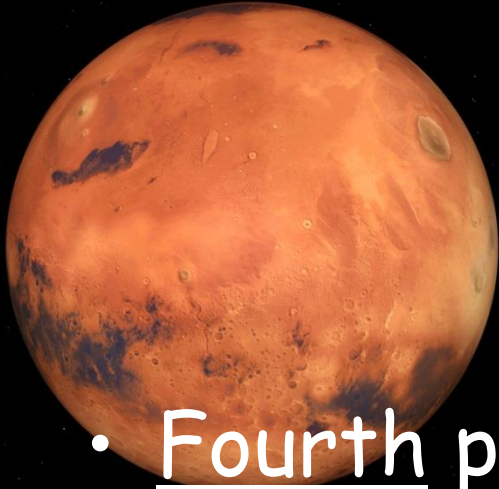
- Third planet from the Sun
- Earth is warm enough to keep most of its water from freezing and cold enough to keep it's water from boiling
- Temperature is between -13 degrees Celsius and 37 degrees Celsius

Earth

- Largest of the four inner planets
- Only planet where life is known to exist
- 70% of the surface is covered by water



Mars



- Fourth planet from the Sun
- Approximately half the size of Earth
- Known as the Red Planet
- Has four seasons similar to Earth
- Resembles Earth more than any other planet

Mars

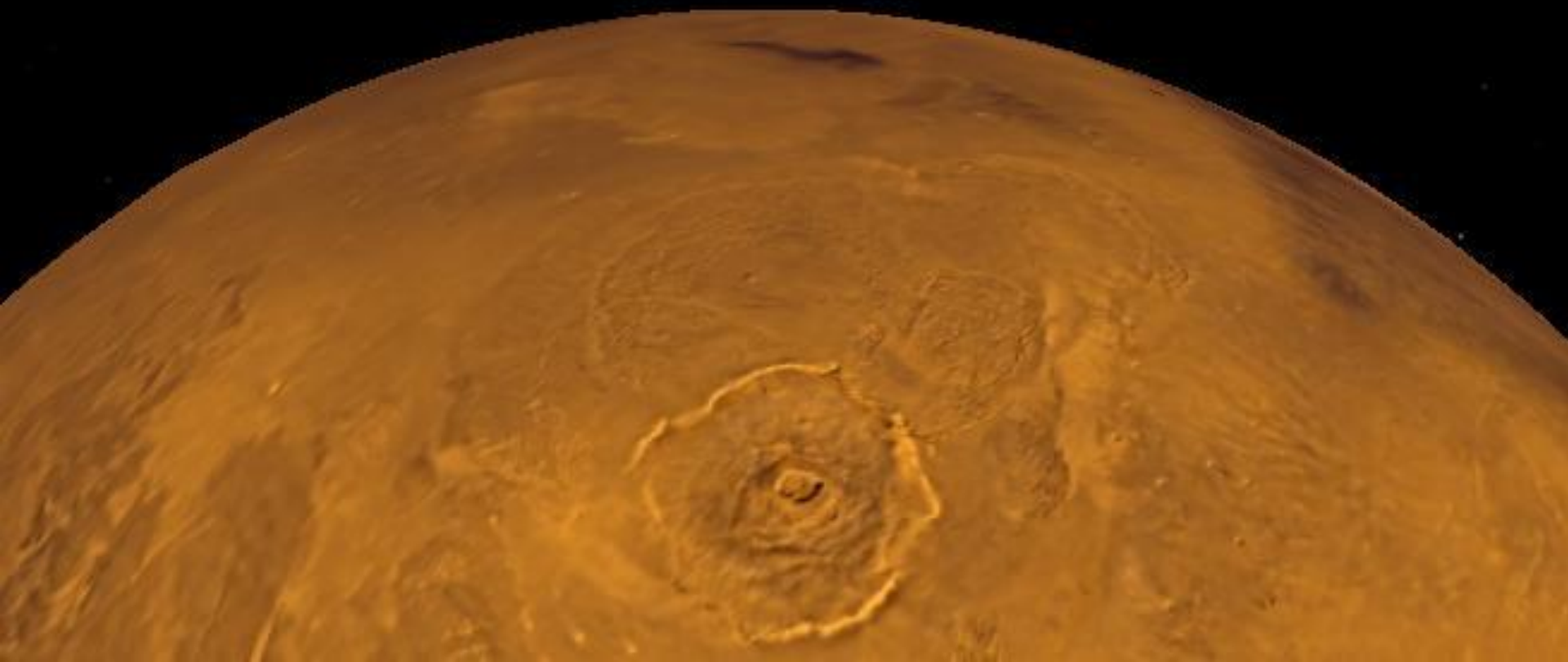
- Air Pressure on Mars is the same as 30 km above the Earth's surface
- Mars is in the form of ice.
- Evidence that water was there at one time
- Volcanic history like Earth.
- It has the tallest mount of the planets (Olympus Mons) 3x's size of Mt. Everest.



Solar System Diagram

- 1) Go to www.psa8.wikispaces.com
- 2) Click on Science
- 3) Scroll down to Unit 3
- 4) “Download” the Solar System Diagram Instructions PDF

Exit Slip

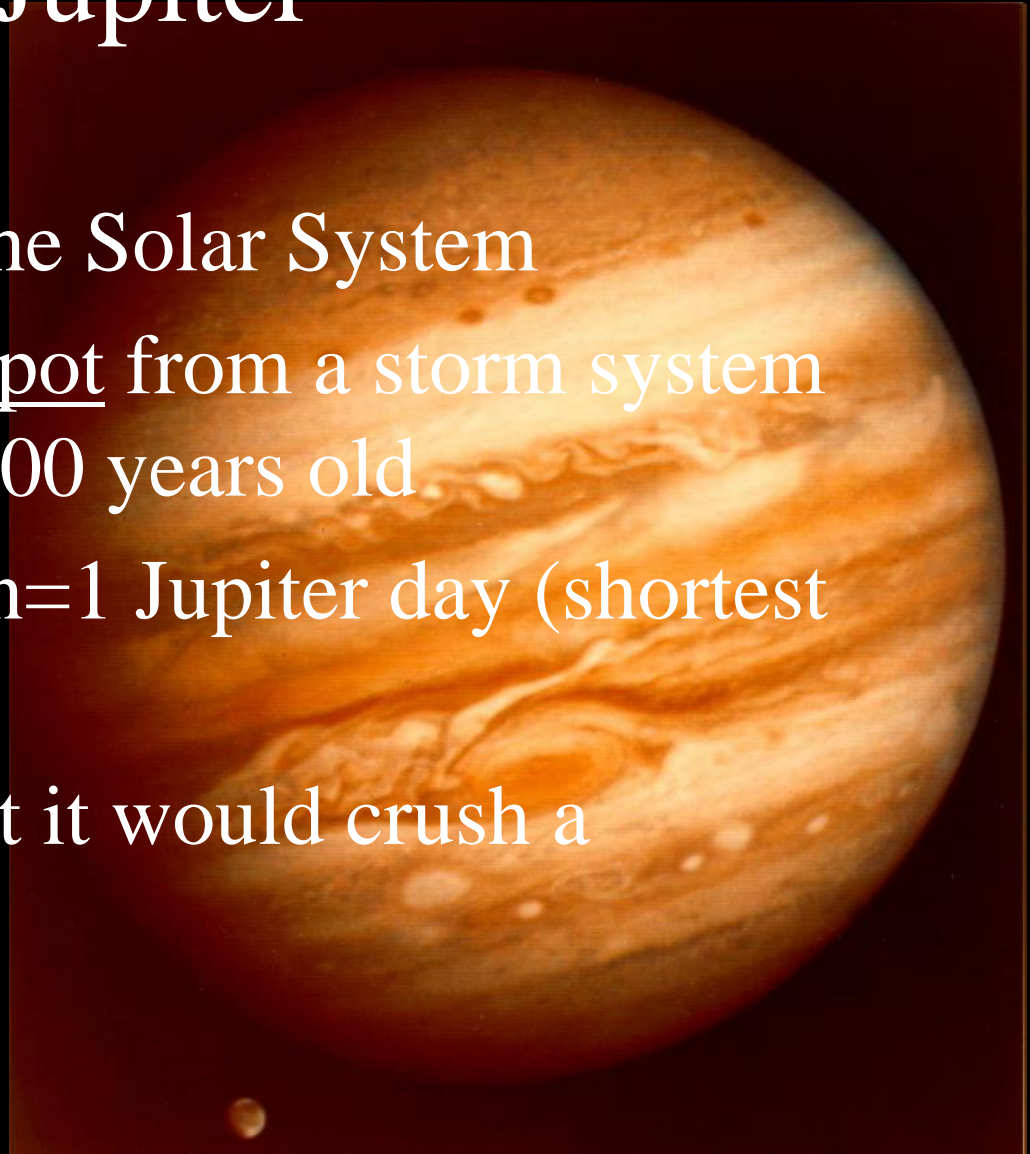


Outer Planets



Jupiter

- Largest planet in the Solar System
- Has a Great Red Spot from a storm system that is more than 400 years old
- 9 hours and 54 min=1 Jupiter day (shortest day)
- Pressure is so great it would crush a spaceship.



Saturn



- 2nd Largest planet in the Solar System
- 95 times more massive than earth.
- Saturn has the largest rings of any planet, the rings are made of icy particles.
- Most moons of any planet.



Uranus

- Discovered in 1781
- Uranus appears blue-green in color
- It's axis of rotation is tilted 90 degrees
- Moons are named after Shakespearean plays and formed from other broken moons.

Neptune



- Discovered in 1846
- Neptune has visual belts of clouds
- Interior releases thermal energy to its outer layers.
- Use to be the 8th planet after Pluto until 1999.

Pluto

- Discovered 1930
- Mystery Planet
- Farthest from the sun
- Smallest planet is moon Charon is more than half it's size
- Made of rock and ice (frozen nitrogen)
- <http://www.youtube.com/watch?v=4pu2KLUzHbQ>

